CLAIMS

What is Claimed is:

1. A system, comprising:

    a database containing device profile data and network specification data; and

    a code generation engine configured to automatically generate software code for a network device as a function of the device profile data, the network specification data and customized device data.

2. The system of claim 1, further comprising:

    a graphical user interface, wherein the customized device data is received via the graphical user interface.

3. The system of claim 1, wherein the device profile data defines device objects, optional features, functions and a device linkage interface.

4. The system of claim 3, wherein the software code includes a first code and a second code, the code generation engine being configured to generate the first code for the device objects and the second code for the device linkage interface.

5. The system of claim 1, wherein the device profile data and the network specification data conform to the DeviceNet specification.

6. The system of claim 4, wherein the device objects include required objects.

7. The system of claim 6, wherein the device objects further include optional objects.

8. The system of claim 6, wherein the customized device data includes optional features of the required object, the optional features being provided via a graphical user interface.

9. The system of claim 8, wherein the optional features include optional attributes, optional services, optional data types, optional states and optional data forms.

10. The system of claim 7, wherein the optional objects include at least one of required attributes, optional attributes and conditional attributes.

11. The system of claim 2, wherein the graphical user interface includes a question and answer system.

12. The system of claim 2, wherein the graphical user interface includes a hierarchal tree representation.

13. The system of claim 1, wherein a portion of the device profile data is selectable via the graphical user interface.

14. A method, comprising the steps of:

    receiving customized device data for a first device of a network;

    generating a first software code for device objects of the first device and a second software code for a device linkage interface, each as a function of device profile data, network specification data and the customized device data; and

    automatically generating a software code using the first and second software codes to allow communications between the first device and a second device of the network.

15. The method of claim 14, further comprising the step of:

    displaying a graphical user interface, wherein the receiving step is performed using the graphical user interface.

16. The method of claim 14, wherein the device objects include required objects.

17. The method of claim 16, wherein the device objects further include optional objects.

18. The method of claim 14, wherein the customized device data includes optional features of the required object.

19. The method of claim 14, further comprising the step of:

    retrieving the device profile data and the network specification data from a database.

20. The method of claim 18, wherein the optional features include optional attributes, optional services, optional data types, optional states and optional data forms.

21. The method of claim 16, wherein the optional objects include at least one of required attributes, optional attributes and conditional attributes.

22. The method of claim 15, wherein the graphical user interface includes a hierarchical tree representation.

23. The method of claim 14, further comprising the steps of:

   receiving a selection of the device profile data, and using the selection to perform the retrieving of the device profile data.

24. The method of claim 15, wherein the receiving step is performed by displaying questions related to the customizing device data and receiving answers related to the customized device data.

25. The method of claim 14, wherein the device profile data and the network specification data conform to the DeviceNet specification.